



RCA VICTOR

RP-190 Series

45 R.P.M. Automatic Record Changer

SERVICE DATA

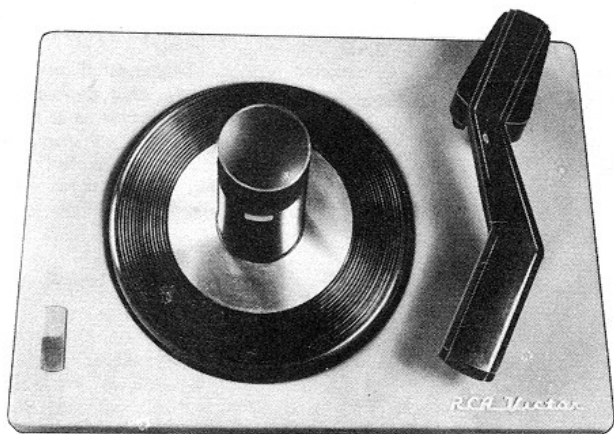
— 1950 No. 14 —

PREPARED BY RCA SERVICE CO., INC.
FOR

RADIO CORPORATION OF AMERICA

RCA VICTOR RADIO AND "VICTROLA" DIVISION

CAMDEN, N. J., U. S. A.



MODEL IDENTIFICATION

- RP-190-1 } Uses crystal pickup Stock No. 74067.
- RP-190-1a } Models 45-EY-2, 45-EY-3, 45-J-2 and 9Y510.
- RP-190-2 } Uses crystal pickup Stock No. 75575. Models
- RP-190-2a } A-82, A-91, A-101, A-108, 45-EY-4, 45-W-9, 45-W-10, 2T81, 4T141, 6T84, 6T86, 6T87, 7T143, 9T89, 9T147 and 45-EY-4.
- RP-190-3 } Uses crystal pickup Stock No. 74067 and special
- RP-190-3a } motor (85 volts). Model 45-EY-3.
- RP-190-4 } Uses crystal pickup Stock No. 74067 and different
- RP-190-4a } "On-Off" switch, otherwise same as RP-190-1 and RP-190-1a.
- RP-190-5 } Uses ceramic pickup Stock No. 76297, different counterbalance spring and motor suitable for 50 cycle conversion. Otherwise same as RP-190-4a. Models QEY4, QEY5, QJY2 and QEY6.
- RP-190-6 } Uses crystal pickup Stock No. 74067. Otherwise same as RP-190-4a.
- RP-190A-1 } Uses crystal pickup Stock No. 75575. Does not use "On-Off" switch. Otherwise same as RP-190-2a. Models 15-E and 15-E-1.
- RP-190A-2 } Uses crystal pickup Stock No. 74067. Five parts differ in color only. Otherwise same as RP-190-1a. Model 45-EY-26.
- RP-190A-3 } Uses ceramic pickup Stock No. 79791. Item 25 different and Item 31 not used. Otherwise same as RP-190-2, Model 45-HY-4.
- RP-190B-1 } Uses crystal pickup Stock No. 74067. See parts list describing difference between RP-190B-1 and RP-190-1, Models 6-EY-1, 6-JY-1.

NOTE: RP-190-1 vs. RP-190-1a.
RP-190-2 vs. RP-190-2a, etc.

Two types of cycling slides and counterbalance assemblies have been used. The "a" in the identification indicates the use of the late type assemblies. See Page 10 for details.

CAUTION

1. Avoid handling the pickup arm when the mechanism is in cycle.
2. Do not use force to release a jam.
3. Do not try to remove the records on the turntable if the turntable is stopped in cycle.
4. If the separator knives protrude from the center post when the mechanism is out of cycle, push the "start-reject" knob to reject and the condition should be corrected automatically.

AUTOMATIC OPERATION

1. Place a stack of records over the center post, with the desired selections upward, the last record to be played on top.
2. Pull the "start-reject" knob to "start" (forward) and release. The mechanism will automatically play in sequence one side of each record stacked on the separator shelves.

3. To reject a record being played, pull the "start-reject" knob.
4. At conclusion of playing and as the last record is being repeated, lift the pickup arm and place on its rest. Turn off the power to the drive motor by pushing back on control knob.
5. Remove the stack of records by lifting them straight up.

SPECIFICATIONS

Turntable speed.....	45 r.p.m.
Records used.....	RCA type seven-inch fine groove
Record capacity.....	Up to 14 records
Pickup force.....	Approx. 5 grams
Stylus tip radius.....	.001 inch
Power supply.....	105-125 volts, 60 cycle, a.c.

(RP-190-3 uses 85 volt, 60 cycle motor.)

(RP-190-5 may be converted to 50 cycle operation.)

LUBRICATION

A light machine oil (SAE No. 10) should be used to oil the bearings of the drive motor.

On all bearing surfaces, excepting the motor bearings, Houghton STA-PUT No. 320, or equivalent, should be used. On all other sliding surfaces, STA-PUT No. 512, or equivalent, is recommended. STA-PUT can be purchased from E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia, Pa.

(Do not oil or grease record separator shelves.)

It is important that the drive motor spindle and the rubber tire on the idler wheel be kept clean and free from oil or grease, dirt, or any foreign material at all times. Carbon tetrachloride or naphtha is satisfactory for cleaning these parts.

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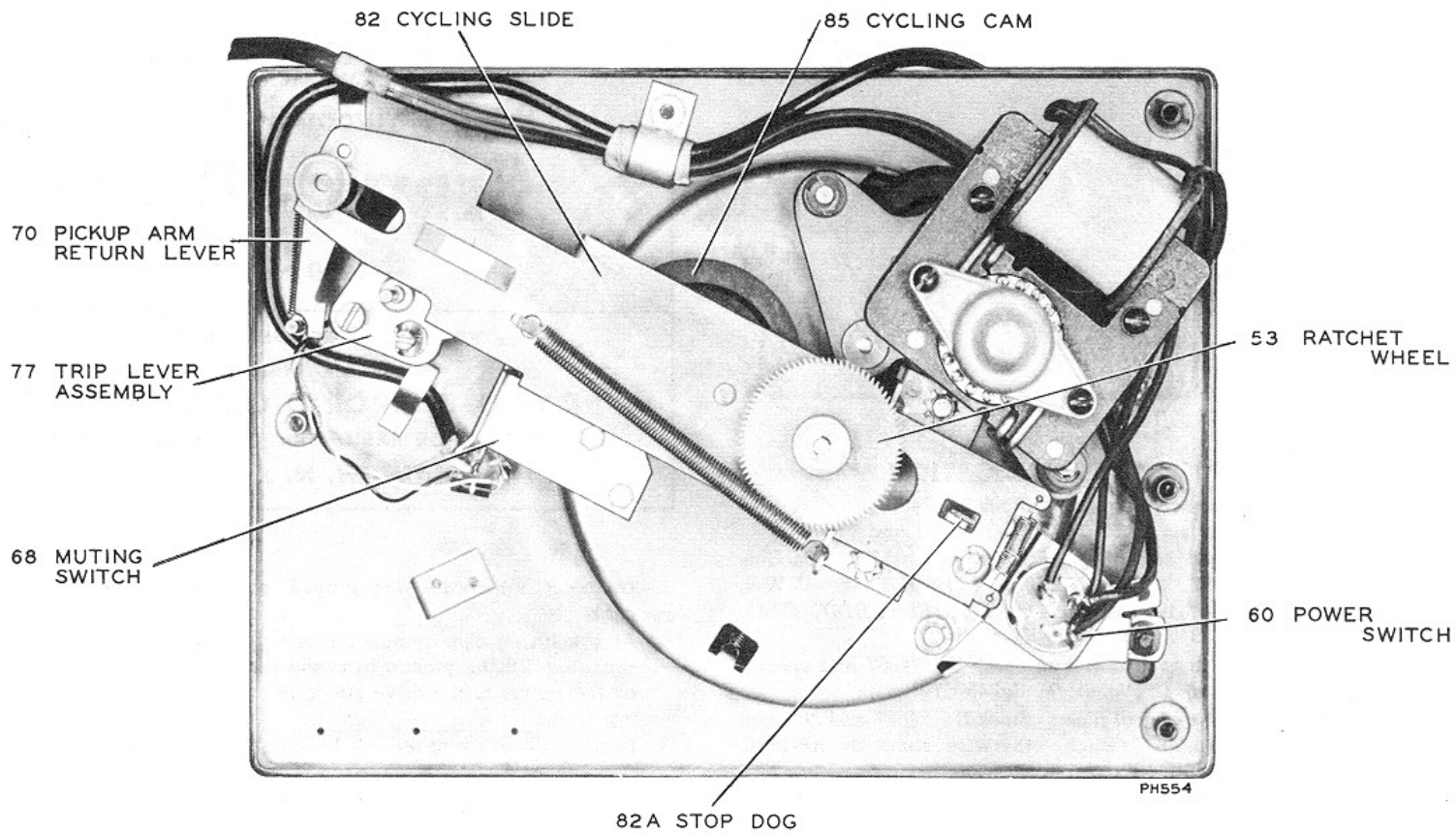


Fig. 1

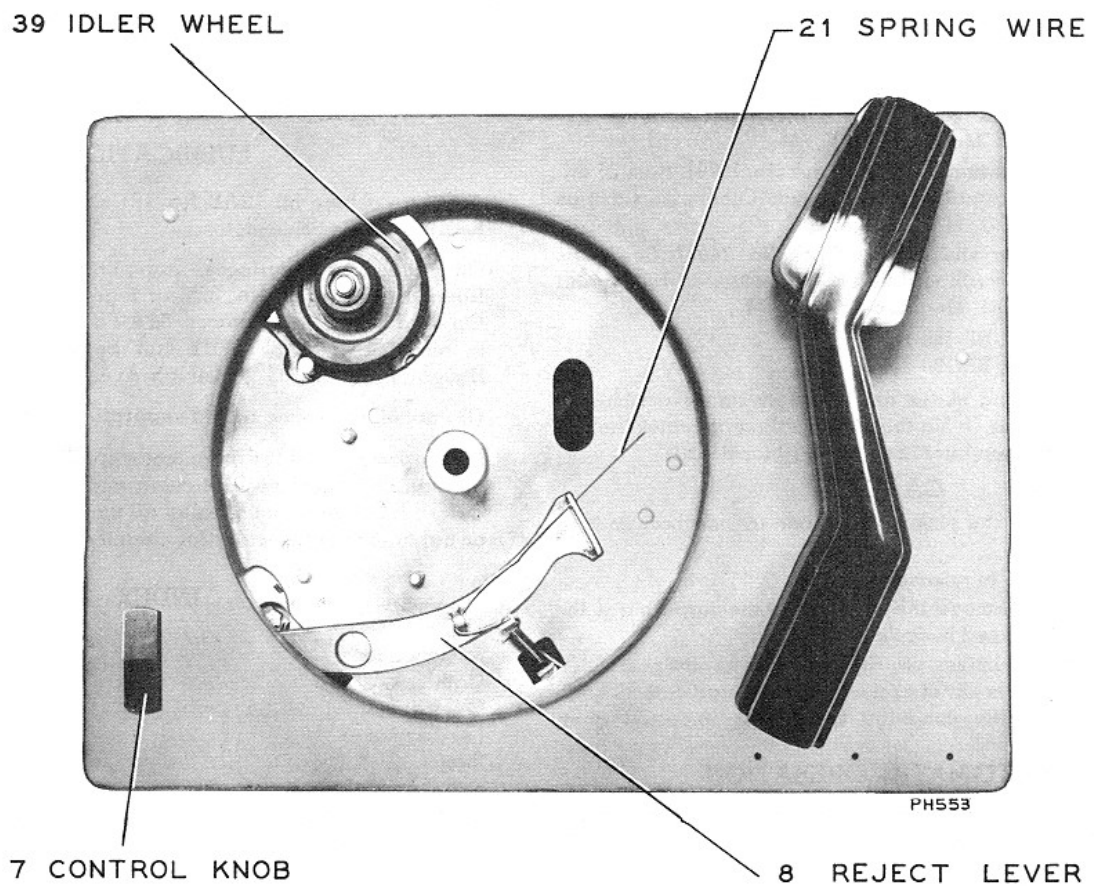


Fig. 2

Function of Principal Parts

Trip Lever (77)

The trip lever is mounted on the bottom end of the pickup arm vertical pivot shaft. The function is to transfer the movement of the pickup arm to parts of the operating mechanism below the motor board. The end of the trip lever contacts stud on cycling cam thereby starts tripping action.

Pickup Arm Return Lever (70)

The function of the pickup arm return lever is to provide a force necessary to push the pickup into landing position. The end of the pickup arm return lever is curved so as to provide a stop for trip lever. This stop determines landing position of the pickup.

Reject Lever (22)

The function of the reject lever is to transfer the action of the control knob to the cycling cam thereby starting a change cycle.

Muting Switch (68)

The function of the muting switch is to short the pickup leads to prevent amplifying of mechanical noise, of the mechanism during change cycle.

Cycling Cam (85)

The cycling cam is mounted on the cycling slide. The function of the cam is to transfer the rotary motion of the turntable shaft into sliding motion of the cycling slide.

Stop Dog (82A)

The stop dog is mounted on the end of cycling slide. The function of the stop dog is to engage the ratchet wheel on the separator shaft and prevent it from rotating, at the exact moment during change cycle.

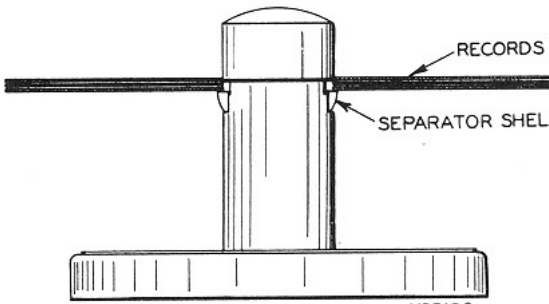
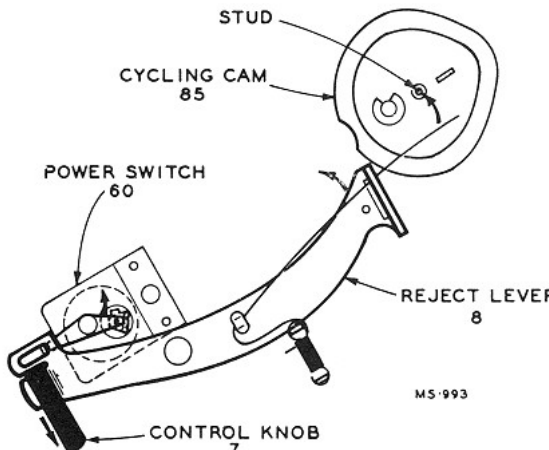
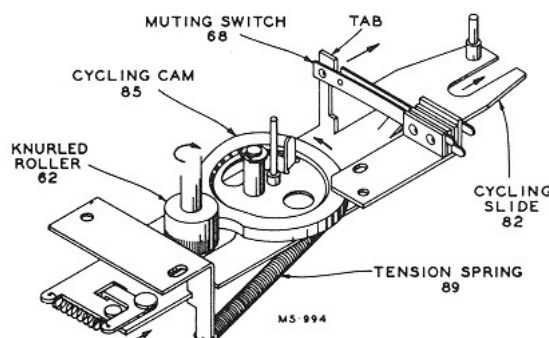
Ratchet Wheel (53)

The function of the ratchet wheel located on the end of the separator shaft is to keep the separator shaft stationary at the proper time, so as to actuate the separator mechanism inside the centerpost.

Cycling Slide (82)

The cycling slide is the main connecting medium between the various moving parts.

Cycle of Operation

FUNCTION	EXPLANATION	
Place a stack of records over centerpost.	1. Records rest on separator shelves protruding from either side of the centerpost.	 <p>MS 742 C</p> <p>Fig. 3</p>
Push control knob to reject.	1. The control first actuates the power switch applying power to the drive motor. This starts the turntable rotating. 2. Further movement of the control knob actuates the reject lever assembly (8) which contacts the stud mounted on the eccentric cycling cam and moves it slightly.	 <p>MS 993</p> <p>Fig. 4</p>
Cycling starts.	1. The slight movement of the eccentric cycling cam (85) is sufficient for engagement with the rotating knurled roller (62) mounted on turntable shaft. 2. The eccentric cycling cam which is mounted on the cycling slide (82) pushes the slide in the direction of the pickup arm pivot. In so doing tension is increased on the slide return spring (89). 3. The tab on the cycling slide moves back permitting muting switch to close.	 <p>MS 994</p> <p>Fig. 5</p>

Cycle of Operation—Continued

Pickup raises from the rest.

1. As the cycling slide continues to move in the direction of the pickup arm pivot the small incline pressed in the slide causes the elevating rod (74) to lift the pickup arm from the rest.
2. The raised pickup arm moves inward slightly from the inward force of the pickup arm return lever (70), until the stud on the trip lever (77) assembly comes against edge of the cycling slide.
3. The cycling slide continues to move further, which pushes the trip lever back. The eccentric landing adjustment stud (79) contacts and pushes the pickup arm return lever (70) against the tension of the return spring (69).

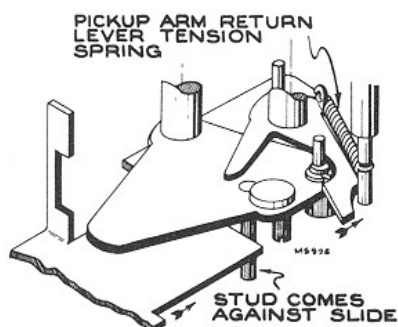


Fig. 6

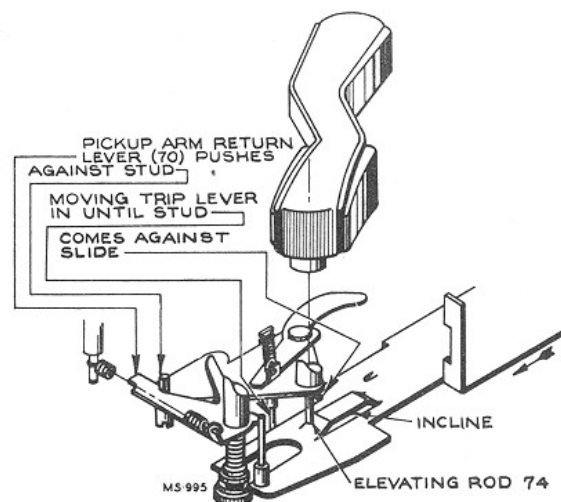


Fig. 7

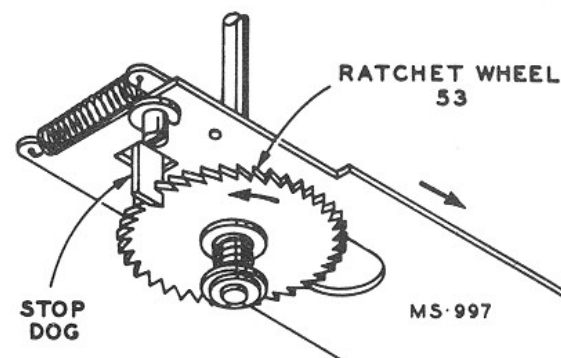


Fig. 8

Separator knives separate the lower record from the stack and the lower record drops to the turntable.

1. As the cycling slide reaches the limit in its movement in the direction of the pickup arm pivot, the stop dog mounted on the slide engages the rotating ratchet wheel (53).
2. The ratchet wheel and separator shaft (6) then remains stationary and the turntable continues to rotate.
3. The separator shelves and knives are coupled together in such a manner that the flattened end of the separator shaft pushes the knives out, which in turn pulls the opposite shelves in.
4. As the shelves recede, the separator knives mounted above the shelves move out and separate the lower record of the stack and support the remaining records while the lower record drops to the turntable.

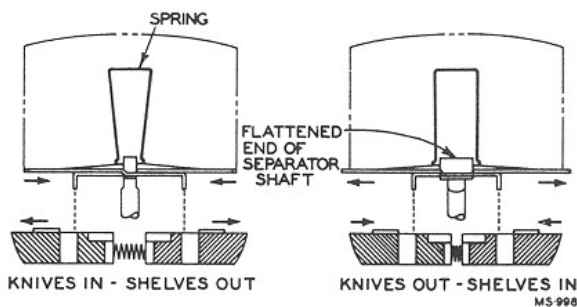


Fig. 9

Pickup moves in for landing.

1. The cycling slide moves away from the pickup arm pivot, due to the force produced by the tension spring (89) keeping the eccentric cycling cam against the rotating knurled roller (62). The knurled roller at this time is returning to the smaller diameter of the cam.
2. The stud on trip lever assembly follows the slide due to the force produced by the action of the pickup arm return lever.
3. After the slide has moved back a short distance the stud on the trip lever assembly no longer follows the slide since the landing adjustment stud comes against the curved stop on the end of the pickup arm return lever. At this moment the pickup is directly above the point of landing.
4. As the cycling slide completes the return movement the elevating rod slides down the incline which lowers the stylus on the record.

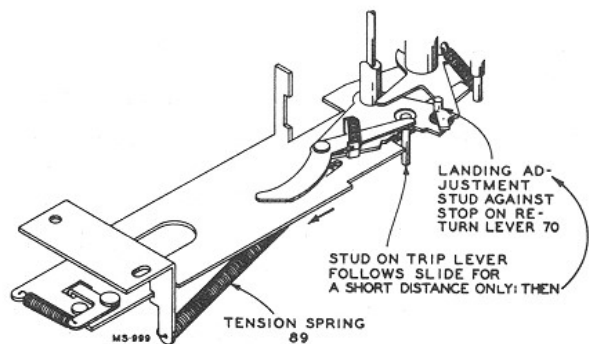


Fig. 10

Cycle completed and the record plays.

1. The tab on the cycling slide contacts and opens the muting switch.
2. The stud on the cycling slide pushes pickup arm return lever back to permit free motion of the pickup arm.
3. The change cycle is completed as the cycling slide comes against the stop bracket, at which time the knurled roller rotates in the cut away section of the cam.
4. As the record plays and the pickup arm moves inward.
5. When the stylus reaches the end of the selection the end of the trip lever contacts the stud on the cycling cam, and pushes it slightly.
6. The slight movement of the cycling cam causes engagement with the rotating knurled roller, thereby starting a change cycle.
7. The mechanism repeats the preceding sequence of operations until the last record of the stack has dropped and has been played. This selection will be repeated until the pickup is lifted and placed on the rest.

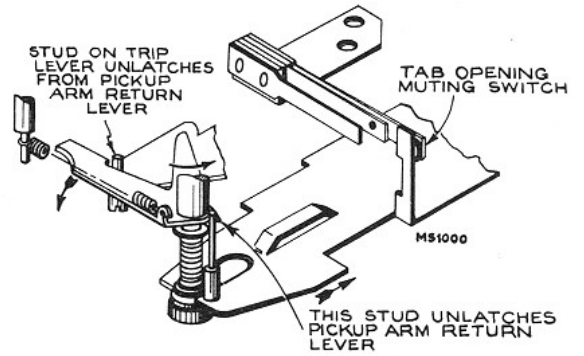


Fig. 11

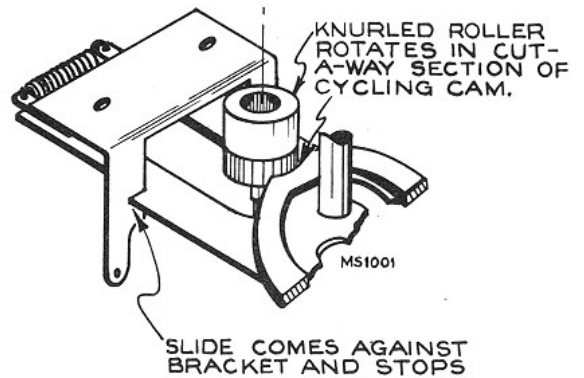


Fig. 12

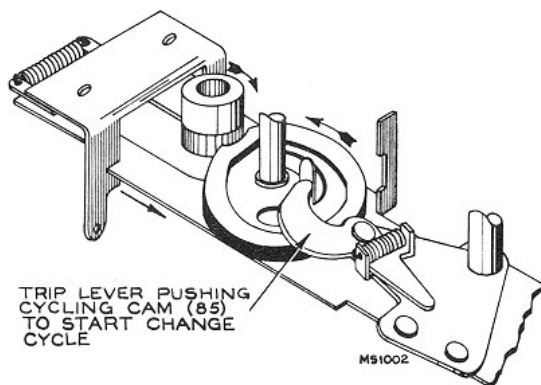
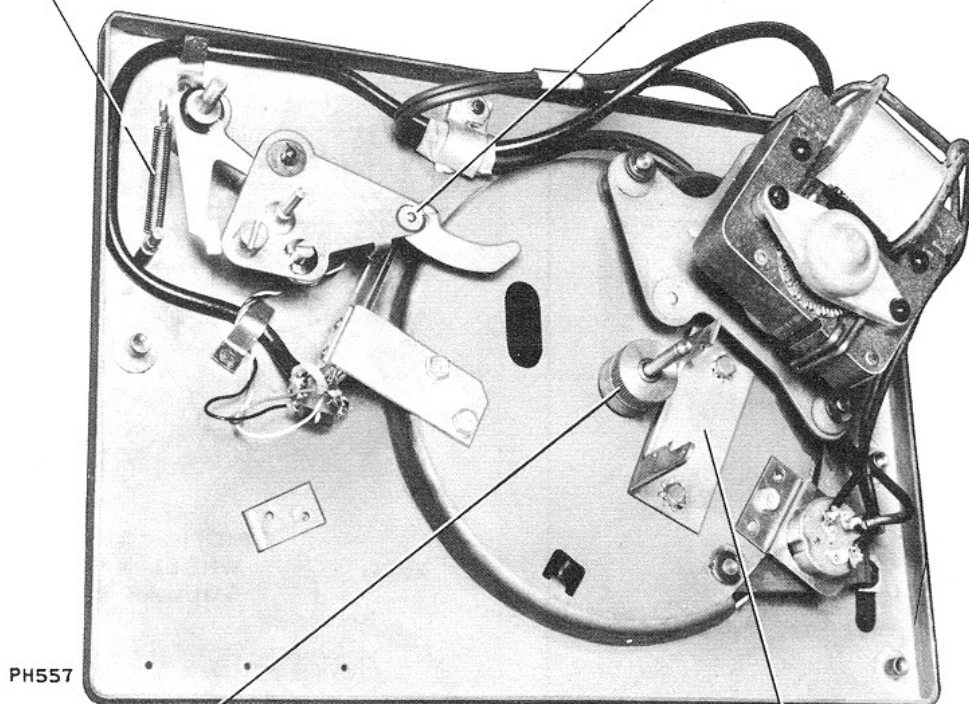


Fig. 13

DO YOU KNOW?

IF THIS SPRING IS LOOSE OR MISSING, PICKUP WILL NOT LAND PROPERLY

IF THERE IS A BIND IN THIS PIVOT, MECHANISM MAY NOT TRIP



IF THIS KNURLED ROLLER IS LOOSE, MECHANISM MAY FAIL TO COMPLETE CYCLE

IF THIS BRACKET IS IMPROPERLY ADJUSTED, THE CYCLING SLIDE MAY BIND OR CONTINUOUS TRIPPING MAY RESULT

Fig. 14

DO YOU KNOW?—Continued

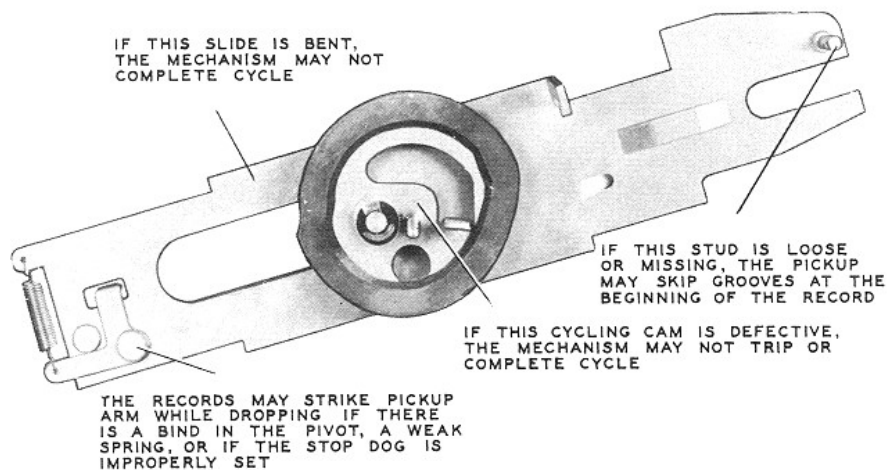


Fig. 15

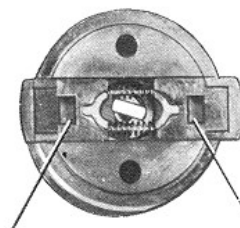


Fig. 16

SERVICE HINTS

REJECT CONTROL FAILS TO OPERATE

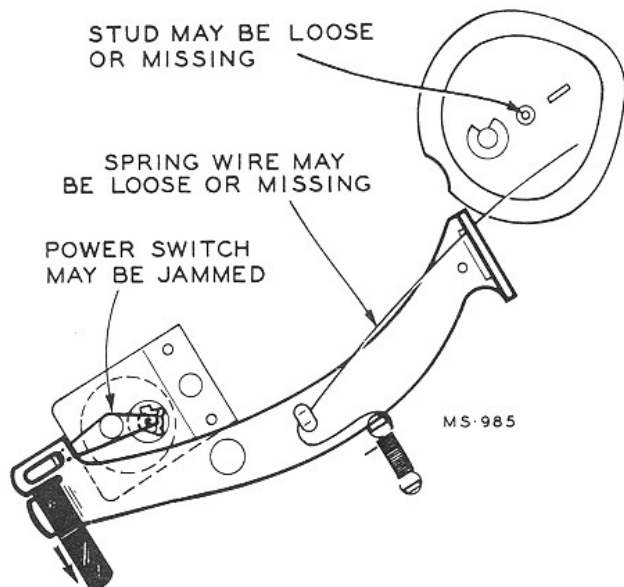


Fig. 17

MECHANISM FAILS TO SEPARATE RECORDS PROPERLY

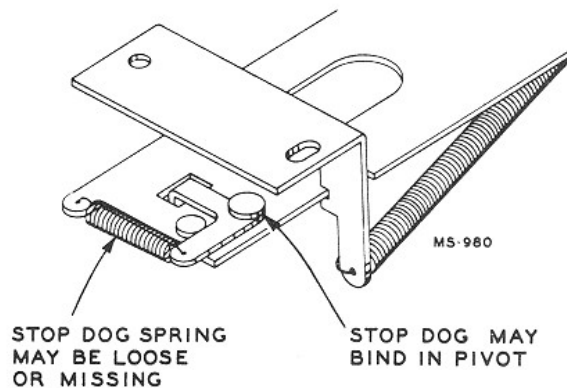


Fig. 18

RECORD STRIKES PICKUP ARM WHEN DROPPING

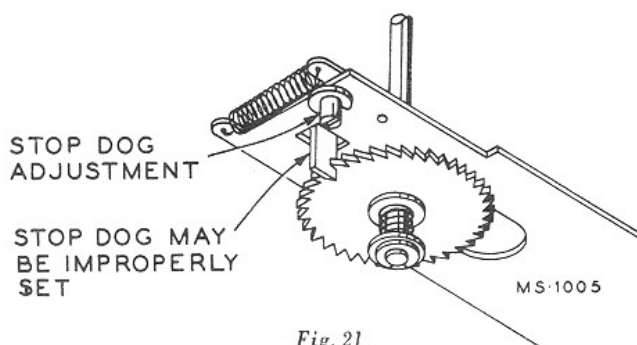
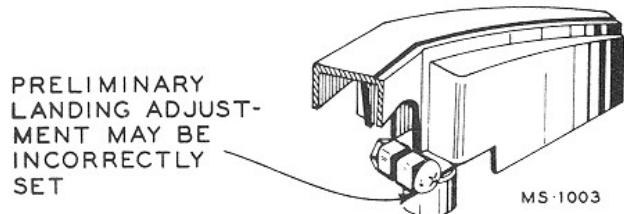


Fig. 21

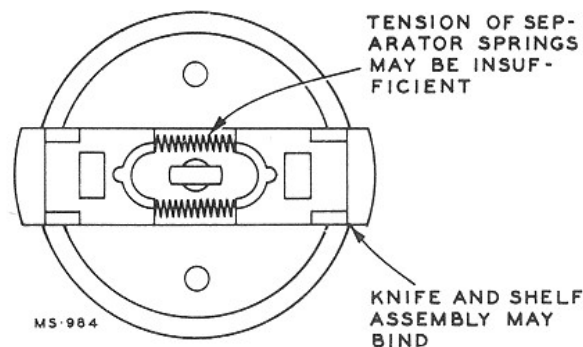


Fig. 19

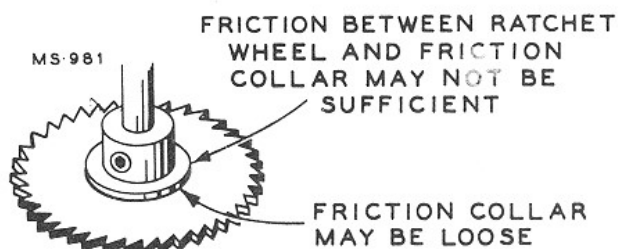


Fig. 20

PICKUP FAILS TO LAND PROPERLY

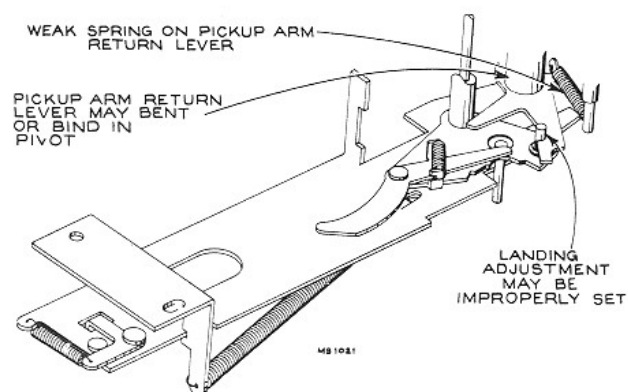


Fig. 22

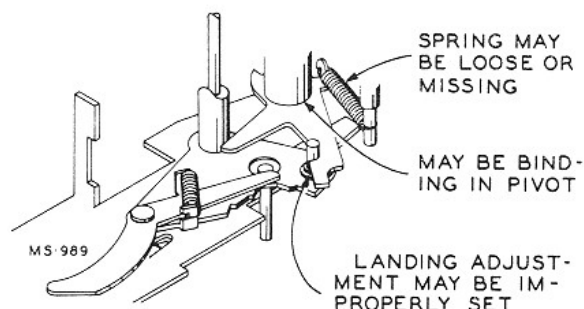


Fig. 23

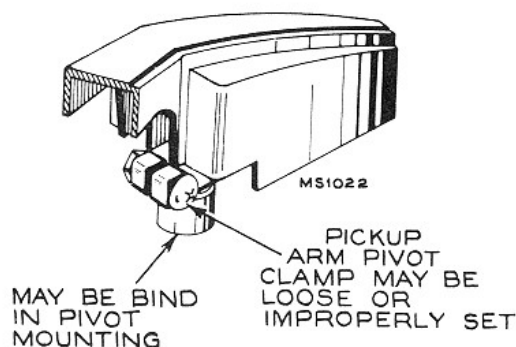


Fig. 24

DISTORTED OR NO OUTPUT

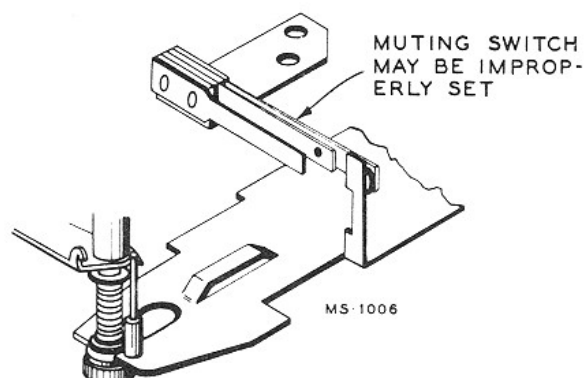


Fig. 28

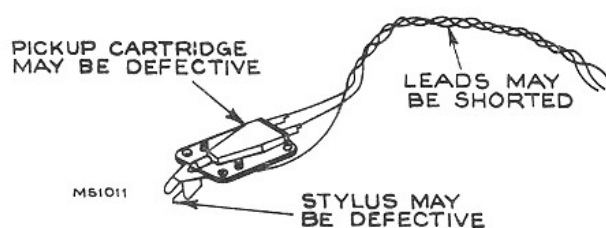


Fig. 29

PICKUP SKIPS GROOVES

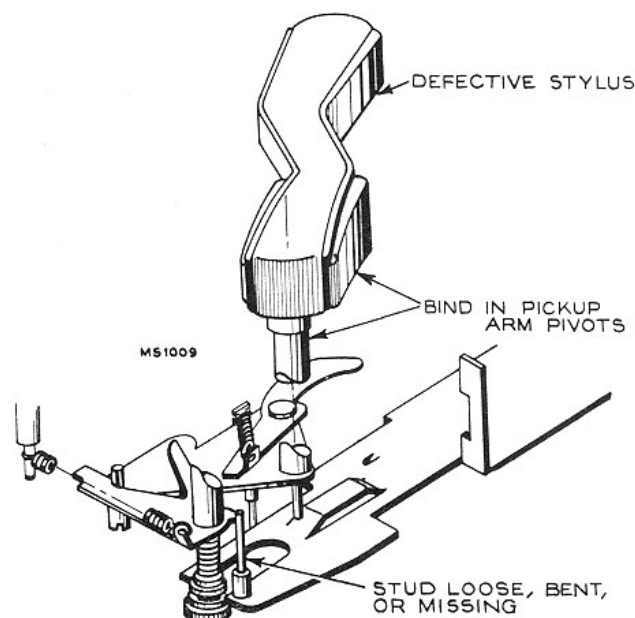


Fig. 25

MECHANISM FAILS TO TRIP

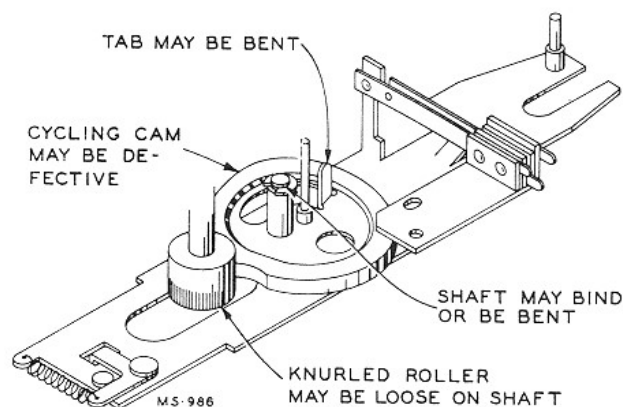


Fig. 26

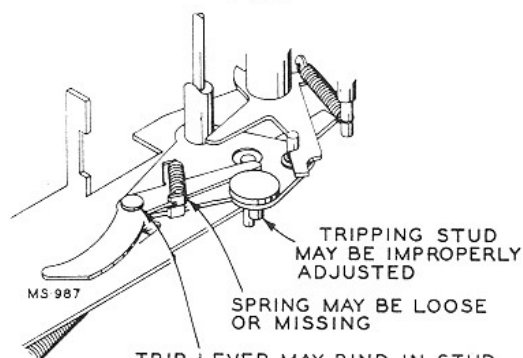


Fig. 27

PREMATURE TRIPPING

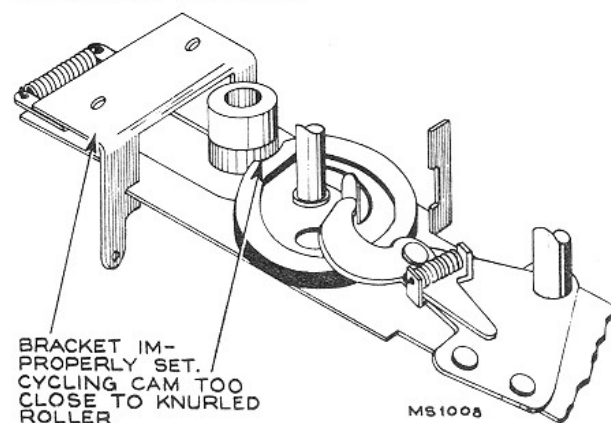


Fig. 30

"WOW" OR SPEED VARIATION

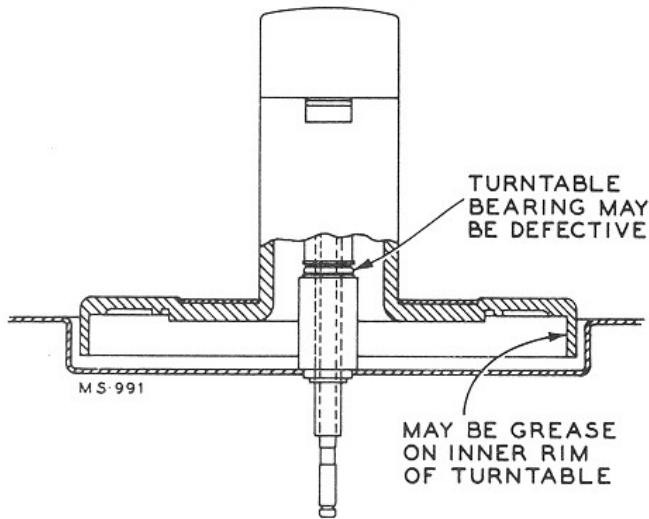


Fig. 31

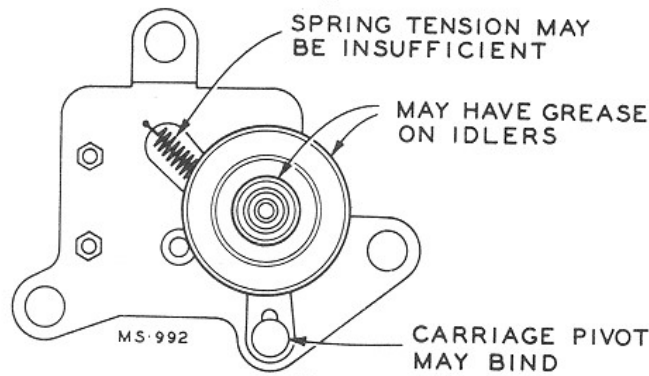


Fig. 32

CONTINUOUS TRIPPING

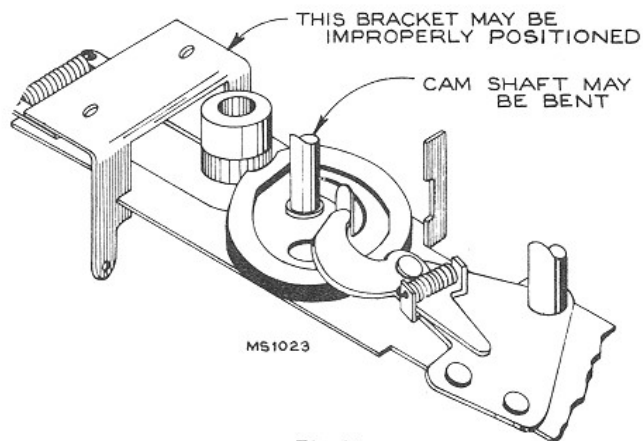


Fig. 34

RUMBLE

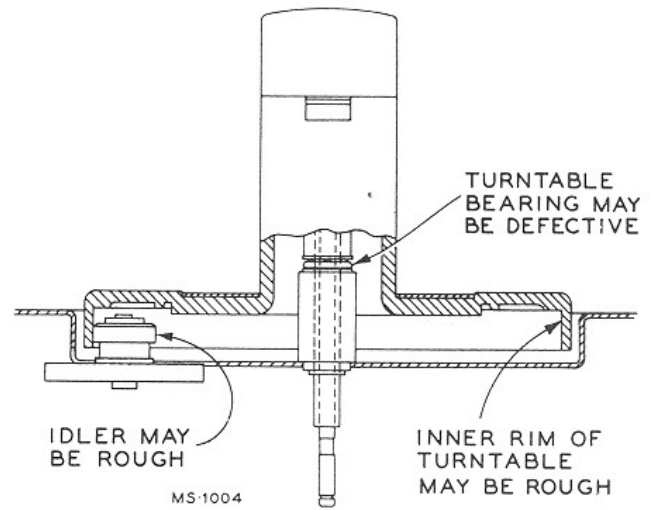


Fig. 33

MECHANISM FAILS TO COMPLETE CYCLE

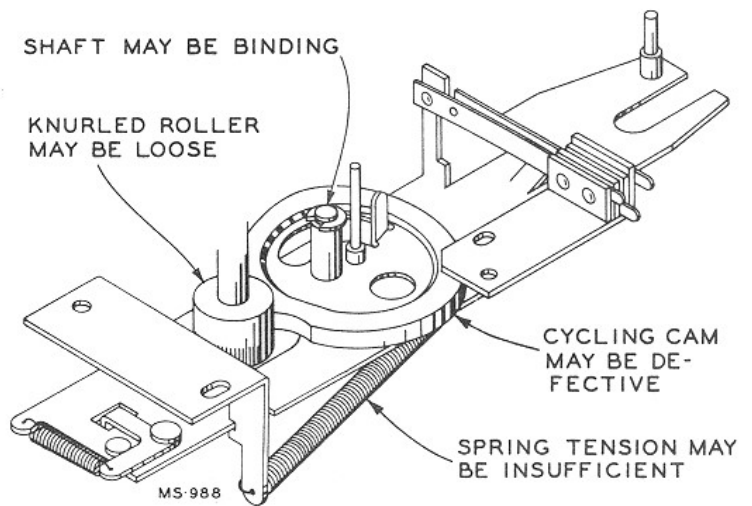


Fig. 35

ADJUSTMENTS

LANDING

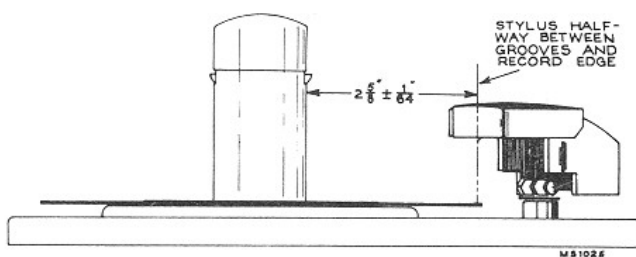


Fig. 36

TRIPPING

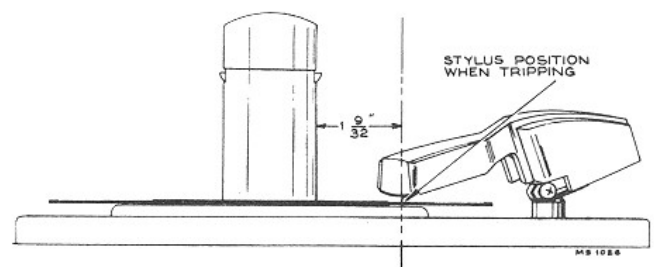


Fig. 37

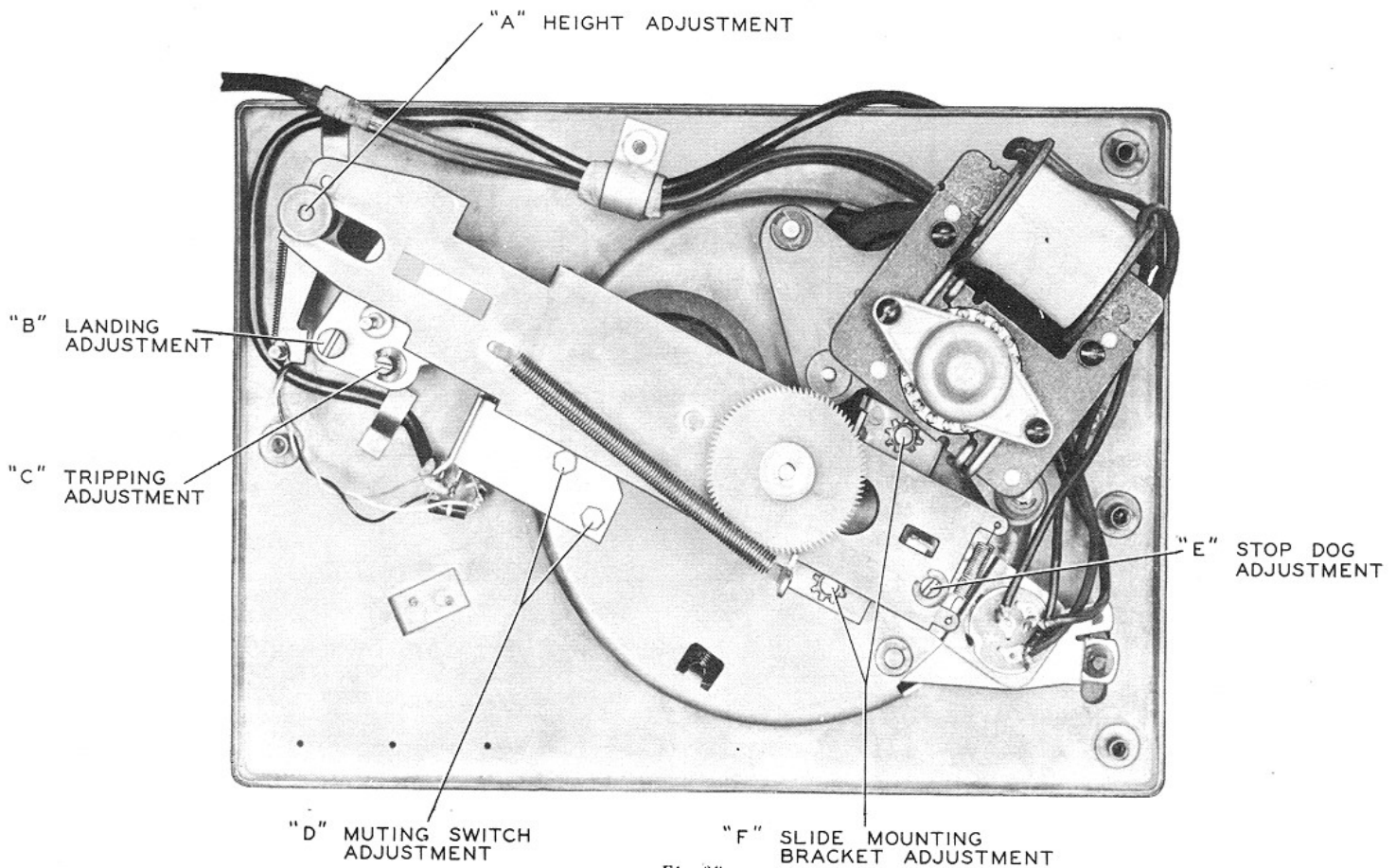


Fig. 38

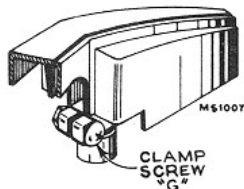


Fig. 39

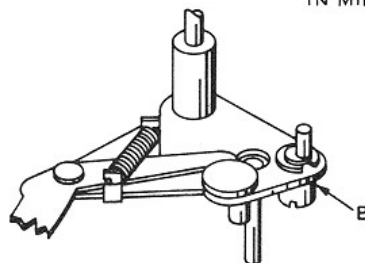


Fig. 40

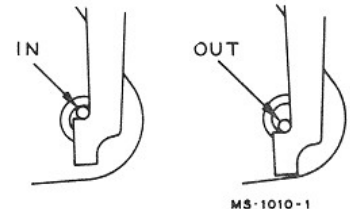
LANDING ADJ.
ECCENTRIC STUD
IN MID POSITIONPOSITION OF LANDING ADJ.
ECCENTRIC STUD FOR PICKUP
FURTHERST—

Fig. 41

Adjustments

Pickup Landing Adjustment:

Under ordinary conditions the landing adjustment is a screw-driver adjustment as shown. The adjustment of eccentric landing adjustment stud (B) gives approximately a $\frac{1}{4}$ " movement. (See Figs. 38, 40.)

If, however, the pickup arm has been removed it is first necessary to make an approximate landing adjustment as follows:

1. With the mechanism out of cycle and the clamp screw (G) (Fig. 39) loose, place pickup arm on the rest and tighten clamp screw enough to prevent the clamp from slipping on the shaft.
2. Set the landing adjustment stud (B) as shown (mid-adjustment). (See Figs. 40, 41.)
3. With the power removed, push reject control to reject. Rotate turntable by hand in the correct direction until the pickup is about ready to land.
4. Loosen clamp screw (G) and move pickup arm so the stylus is approximately $2\frac{5}{8}$ " from side of centerpost. Tighten clamp screw. (See Figs. 36, 39.)
5. Exact landing adjustment can now be made by a screw-driver on stud (B). (See Fig. 38.)

Pickup Height Adjustment (See Fig. 38):

Adjust knurled nut (A) until the distance (during change cycle) between the top of the turntable and the stylus point is approximately $1\frac{1}{8}$ ".

NOTE: If unable to adjust for sufficient height, it may be necessary to cut a few turns from the compression spring to allow more space on the shaft.

Tripping Adjustment (See Figs. 37, 38):

Adjust the eccentric tripping stud (C) until the mechanism trips when the stylus is $1\frac{9}{32}$ " from the side of the centerpost.

Mounting Bracket Adjustment (See Fig. 38):

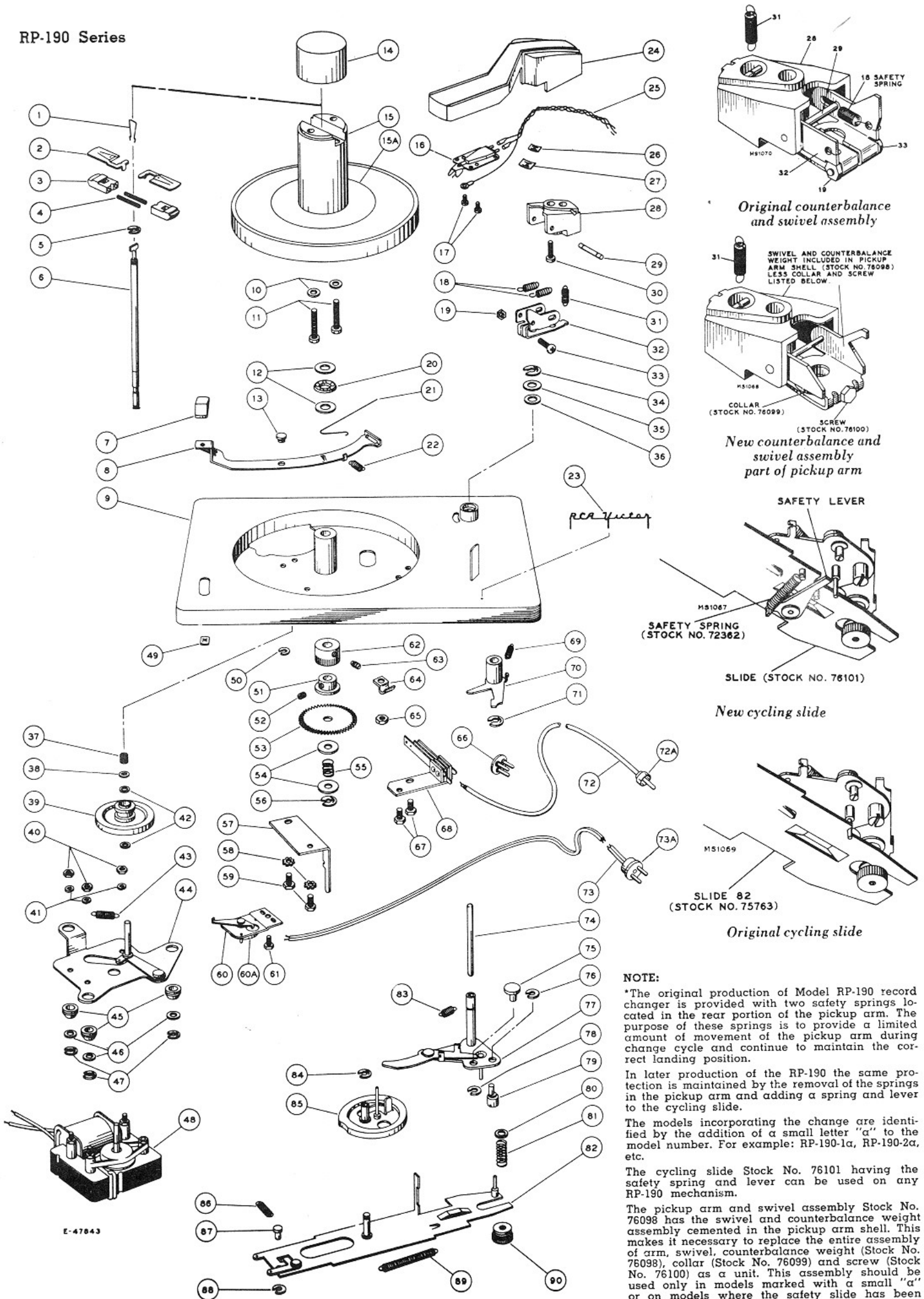
Loosen the two screws (F) and move the bracket so it is as near perpendicular to the slide as possible. Move back or forward until the cut away section of the cycling cam clears the knurled roller approximately $1/16$ ". Tighten screws.

Muting Switch Adjustment (See Fig. 38):

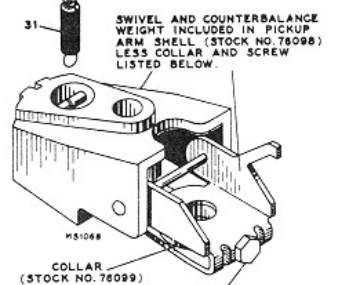
Loosen the two screws (D) and adjust the position of the switch so the contacts are approximately $1/32$ to $1/16$ inches apart when the mechanism is out of cycle. If the mounting screws do not give sufficient adjustment, bend tab on slide slightly.

Stop Dog Adjustment (See Fig. 38):

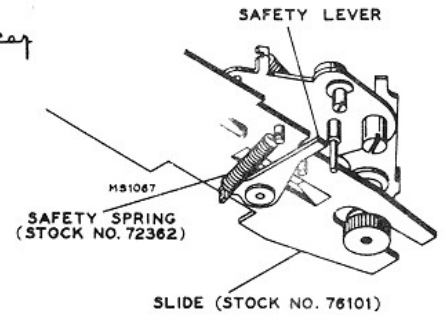
Turn the eccentric screw (E) until the record drops to the turntable without striking the pickup arm.



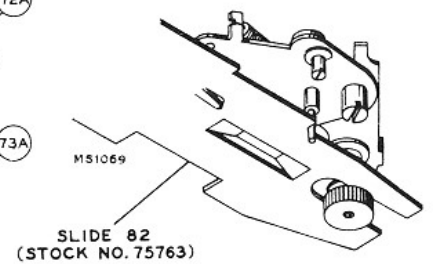
Original counterbalance and swivel assembly



New counterbalance and swivel assembly part of pickup arm



New cycling slide



Original cycling slide

NOTE:

*The original production of Model RP-190 record changer is provided with two safety springs located in the rear portion of the pickup arm. The purpose of these springs is to provide a limited amount of movement of the pickup arm during change cycle and continue to maintain the correct landing position.

In later production of the RP-190 the same protection is maintained by the removal of the springs in the pickup arm and adding a spring and lever to the cycling slide.

The models incorporating the change are identified by the addition of a small letter "a" to the model number. For example: RP-190-1a, RP-190-2a, etc.

The cycling slide Stock No. 76101 having the safety spring and lever can be used on any RP-190 mechanism.

The pickup arm and swivel assembly Stock No. 76098 has the swivel and counterbalance weight assembly cemented in the pickup arm shell. This makes it necessary to replace the entire assembly of arm, swivel, counterbalance weight (Stock No. 76098), collar (Stock No. 76099) and screw (Stock No. 76100) as a unit. This assembly should be used only in models marked with a small "a" or on models where the safety slide has been changed to the new type slide Stock No. 76101.

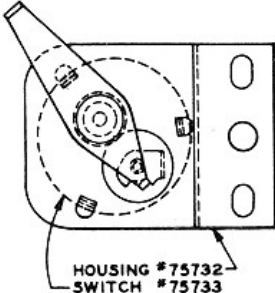
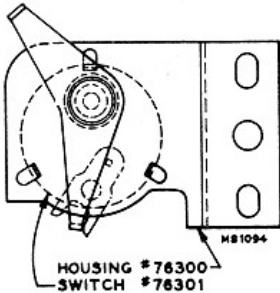
Fig. 42

REPLACEMENT PARTS

RP-190 Series

ILL. No.	STOCK No.	DESCRIPTION	ILL. No.	STOCK No.	DESCRIPTION
1	74862	Spring—Spindle nose spring—formed	21	75740	Spring—Reject lever spring (formed), part of reject lever
2	74864	Separator—Separator knife	22	75742	Spring—Reject lever return spring (.180" O.D. x .535"—21½ turns)
3	74865	Shell—Separator shell	23	74782	Emblem—"RCA Victor" emblem (maroon)
4	75756	Spring—Separator shelf return spring (.118" O.D. x ¾"—16 turns)	23	76726	Emblem—"RCA Victor" emblem (red)
5	33726	Washer—"C" washer to hold separator shaft and cam	23	77033	Nameplate—RCA Victor nameplate RP-190B-1
6	75757	Shaft—Separator shaft with cam	23A	77013	Nut—Speed nut for nameplate RP-190B-1
7	75741	Knob—Control knob (maroon)	24	*75719	Arm—Pickup arm shell only (see note)
7	76725	Knob—Control knob (red)	24	76098	Arm—Pickup arm (black) (late type) complete with counterbalance, swivel and pin—less collar, pickup and cable (see note)
7	100159	Knob—Control knob (grey) RP-190B-1	24	76709	Arm—Pickup arm (red) complete with counterbalance, swivel and shaft—less pickup and cable
8	75739	Lever—Reject lever complete with formed spring	24	100161	Arm—Pickup arm shell only RP-190B-1
9	75729	Board—Motorboard sub-assembly complete with welded and/or staked studs and rest	24A	100162	Emblem—Pickup arm RCA emblem RP-190B-1
9	76724	Board—Motorboard (ivory) complete with welded and/or staked studs and rest	24A	76099	Collar—Pickup arm pivot shaft collar—less screw—for late type pickup arm
9	100158	Board—Motorboard sub-assembly with welded and/or staked studs and pickup rest (light rose gold finish) RP-190B-1	25	75728	Cable—3-wire twisted pickup arm cable complete with connectors for all models using crystal pickups
10	74869	Washer—No. 6 flat washer for under head of screws No. 75758	25	76298	Cable—3-wire twisted pickup arm cable complete with connectors for RP-190-5 using ceramic pickup
11	75758	Screw—No. 6-32 x 1" fillister head machine screw (holds nose to spindle)	25	74066	Cable—3 wire twisted pickup cable complete with connectors RP-190B-1
12	74080	Washer—Thrust bearing washer	26	71095	Nut—Speed nut for cable—in rear of arm
13	75748	Stud—Reject lever mounting stud	27	72765	Nut—Speed nut for cable—in center of arm
14	75755	Cap—Spindle nose cap—red	28	*75721	Weight—Counterbalance weight—die cast (see note)
14	100163	Cap—Spindle nose cap (smokey pearl grey) RP-190B-1	28	77572	Swivel—Swivel and counterbalance for pickup arm RP-190B-1
15	75753	Turntable—Turntable (black) and shaft assembly complete with finished disc	29	*75724	Pin—Pin for anchoring shock absorbing springs (see note)
15	76727	Turntable—Turntable (red) and shaft complete with finished disc	30	*75723	Screw—No. 6 x 11/16" fillister head screw to fasten counterbalance (see note)
15A	75754	Disc—Finished disc for turntable—part of No. 75753 and 76727	31	75886	Spring—Counterbalance spring (.180" O.D. x .600"—30 turns for all models using crystal pickups
16	74067	Pickup—Crystal pickup cartridge complete with stylus (RMP 128-1) for RP-190-1, -3, -4, -6, RP-190A-2 and RP-190B-1	31	74060	Spring—Counterbalance spring (.171" O.D. x .695"—43 turns for RP-190-5 using ceramic pickup
16	79791	Pickup—Ceramic pickup cartridge complete with stylus—for RP-190A-3	32	*75720	Swivel—Pickup arm swivel (see note)
16	75575	Pickup—Crystal pickup cartridge complete with stylus (RMP 128-4) for RP-190-2 and RP-190A-1	33	*75726	Screw—No. 8-32 x ¾" cross recessed pan head machine screw to mount pickup arm swivel No. 75720
16	76297	Pickup—Ceramic pickup cartridge complete with stylus for RP-190-5	33	76100	Screw—No. 6-32 x ¼" hex head machine screw for pivot shaft collar No. 76099
16A	74069	Guard—Stylus guard for No. 74067 pickup	34	35969	Washer—"C" washer to mount trip lever
16A	74819	Guard—Stylus guard for No. 75575 pickup	35	75752	Washer—Steel thrust washer
16B	74065	Screw—No. 2-56 x 3/16" fillister head screw to mount No. 74069 or No. 74819 guard	36	76005	Washer—Bearing washer for pickup arm
16C	79849	Stylus—Sapphire stylus (1 mil) for No. 79791 pickup	37	74870	Retainer—Idler wheel retainer (spring sleeve type)
16C	74068	Stylus—Replacement stylus and holder for No. 74067 pickup	37	100156	Retainer—Idler wheel retainer (spring sleeve type) RP-190B-1
16C	75770	Stylus—Replacement stylus and holder for No. 75575 pickup	38	100157	Washer—Spring washer for idler wheel assembly RP-190B-1
16C	74985	Stylus—Replacement stylus for No. 76297 pickup	38	75887	Washer—Spring washer for idler wheel
16D	74230	Nut—Nut and washer to mount No. 74068 or No. 75770 stylus	39	74077	Wheel—Idler wheel
17	75722	Screw—No. 4 x ¼" fillister headscrew to mount pickup	40	—	Nut—No. 6-32 hex nut for mounting motor to idler lever plate assembly
18	*75727	Spring—Shock absorbing spring (.187" O.D. x ¾") (see note)	41	—	Lockwasher—No. 6 split lockwasher for No. 6-32 hex nut
19	*75725	Nut—No. 8-32 hex nut to mount pickup arm (see note)	42	74078	Washer—Dampening washer for idler wheel
20	72349	Bearing—Trust bearing			

*SEE NOTE ON PAGE 10

ILL. No.	STOCK No.	DESCRIPTION	ILL. No.	STOCK No.	DESCRIPTION
43	75762	Spring—Idler wheel tension spring (.195" O.D. x 29/32"—37½ turns)	63	75751	Screw—No. 10-32 x 17/64" headless set screw—dog point—for knurled roller
44	75759	Plate—Motor mounting plate complete with idler lever	64	—	Clamp—Cable clamp for audio cable
45	75761	Grommet—Rubber grommet for motor mounting plate	65	—	Nut—No. 8-32 hex nut to fasten cable clamp ILL. 64
46	75749	Washer—Flat washer—metal (.0299" x .190" I.D. x 3/8" O.D.)—for mounting motor assembly	66	74192	Connector—3 contact male connector for audio cable
47	33726	Washer—"C" washer to mount motor assembly	67	—	Same as 61
48	75760	Motor—117 volt, 60 cycle motor for all models except RP-190-3 and RP-190-5	68	75730	Switch—Muting switch
48	75937	Motor—85 volt, 60 cycle motor for RP-190-3 (used in some Model 45-EY-3)	69	76004	Spring—Pickup arm return lever spring (.195" O.D. x 1¼"—69 turns)
43	76299	Motor—117 volt, 60 cycle motor for RP-190-5 (less conversion spring)	70	75734	Lever—Return lever
—	76302	Spring—Conversion spring sleeve (60 to 50 cycle) for use on No. 76299 motor in RP-190-5	71	35969	Washer—"C" washer to mount return lever
49	74212	Nut—Control knob speed nut	72	—	Cable—Shielded audio cable (see Service Data for various instruments)
50	74431	Washer—Spring washer to mount reject lever mounting stud	72	74545	Cable—Audio cable complete with plug RP-190B-1
51	75736	Collar—Friction collar	72A	31048	Plug—Pin plug for audio cable
52	14974	Screw—No. 8-32 x 3/16" hex socket head—cup point—for friction collar	73	—	Power cord (see Service Data for various instruments)
53	75738	Wheel—Ratchet wheel	73	70392	Cord—Power cord and plug RP-190B-1
54	75750	Washer—Flat washer—metal (.0299" x .180" I.D. x 9/16" O.D.)—for ratchet wheel, thrust spring	73A	30870	Connector—2 contact male connector for power cable
55	75743	Spring—Ratchet wheel thrust spring (5/16" O.D. x 7/16"—5½ turns)	74	75731	Rod—Elevating rod
56	33726	Washer—"C" washer to mount ratchet wheel	75	75768	Stud—Tripping adjustment stud
57	75735	Bracket—Mounting bracket for slide assembly	76	74431	Washer—Spring washer for adjusting studs
58	—	Lockwasher—No. 8 external teeth lockwasher for cycling slide mounting bracket	77	75767	Lever—Trip lever assembly—less spring and tripping and landing adjustment studs
59	74670	Screw—No. 8 x 3/8" self-tapping hex head screw to mount slide assembly bracket	78	74431	Washer—Spring washer for adjusting studs
60	75732	Housing—"On-Off" switch housing and lever—less switch No. 75733	79	75769	Stud—Landing adjustment stud
60	76300	Housing—"On-Off" switch housing and lever—less switch No. 76301	80	75749	Washer—Flat washer—metal (.0299" x .190" I.D. x 3/8" O.D.)—to mount sub-motor-board
			81	75746	Spring—Height adjustment spring (.262" O.D. x 13/16"—8 turns)
			82	*75763	Slide—Cycling slide assembly complete with stop dog—less cam wheel and stop dog adjusting stud (see note)
			82	76101	Slide—Cycling slide (late type) complete with stop dog and safety lever—less cam wheel, safety spring, stop dog spring and stop dog adjusting stud
			82A	—	Dog—Stop dog—part of Item 82
60A	75733	Switch—"On-Off" switch—less housing No. 75732	82B	72362	Spring—Safety lever actuating spring (.242" O.D. x 1"—19½ turns) for slide No. 76101
60A	76301	Switch—"On-Off" switch—less housing No. 76300	83	75742	Spring—Trip lever spring (.180" O.D. x .535"—21½ turns)
61	—	Screw—No. 8 x 1/4" self-tapping hex head screw to mount "On-Off" switch	83	78711	Spring—Trip lever spring RP-190B-1
62	75737	Roller—Knurled roller	84	33726	Washer—"C" washer for cam wheel
			85	75764	Wheel—Cam wheel and tire
			86	75765	Spring—Stop dog tension spring (.195" O.D. x 11/16"—24½ turns)
			87	75766	Stud—Adjusting stud for stop dog
			88	74431	Washer—Spring washer for stop dog adjusting stud
			89	75744	Spring—Slide assembly return spring (¼" O.D. x 2 23/32"—90 turns)
			90	75747	Nut—Knurled nut for height adjustment

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS

ILL. No.	STOCK No.	DESCRIPTION	ILL. No.	STOCK No.	DESCRIPTION
	100160	Board—Terminal board (RP-190B-1)		*76100	Screw—#6x32x $\frac{1}{4}$ hex head machine screw for pivot collar
	502510	Resistor—1 megohm composition resistor, $\frac{1}{2}$ watt		*74453	Washer—Bearing washer under cam wheel and tire
	*76099	Collar—Pickup arm pivot shaft collar (used with new type pickup arm swivel)			

*SEE NOTE ON PAGE 10

SERVICE HINTS

Care of Pickup

LINT MAY COLLECT TO CLOG THE OPENING IN THE GUARD AT THE STYLUS POINT AND CAUSE POOR RECORD REPRODUCTION. This may require occasional cleaning of the guard opening—clean by carefully brushing with a small soft brush.

Replacement of Stylus

Caution: Never bend the stylus support wire.

CRYSTAL PICKUPS (Stock Nos. 74067 and 75575)

Remove the two screws holding sapphire guard in place and remove the guard. Remove the small nut and washer on the threaded shaft of the sapphire holder and gently push the shaft through the hole in the armature shaft until the sapphire holder assembly comes free.

Extreme care should be used when loosening the nut so that the twisting motion does not break the crystal. Take hold of the lower end of the shaft with a pair of pliers while loosening or tightening the nut, being very careful so as not to strip the threads or break the crystal.

Insert threaded shaft of replacement sapphire holder through armature shaft and replace the washer and nut. Make sure that the sapphire is in the correct position.

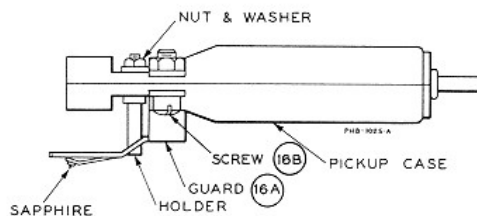
Replace the sapphire guard, positioning it by means of the oversize screw slots. Make certain that the sapphire and its supporting wire are centered in the guard. Tighten the guard screws. Before using, check to see that the sapphire projects far enough beyond the guard so that the guard will not touch the record. If necessary, bend the guard a little.

CERAMIC PICKUP (Stock No. 76297)

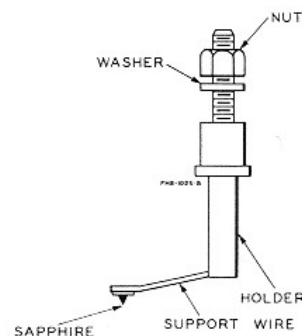
To remove stylus, insert the point of a knife blade between the stylus wire and the case. The stylus may be pried out of its rubber mounting with a twisting motion of the knife blade. To replace stylus, push end of stylus wire down into its rubber mounting. Be certain that the stylus is centered in the groove of the pickup case.

CERAMIC PICKUP (Stock No. 79791)

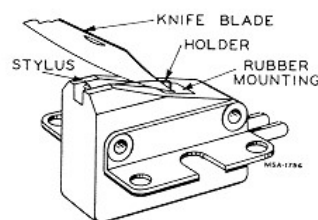
To remove stylus, grip with tweezers at back end and pull away from the pickup. The shank of the stylus holder is imbedded in a rubber block which is set in a "U" shaped spring clip. This spring clip holds the stylus assembly to a plastic support. The shank of the stylus rests in a metal saddle. When replacing stylus, make certain that shank rests firmly in saddle.



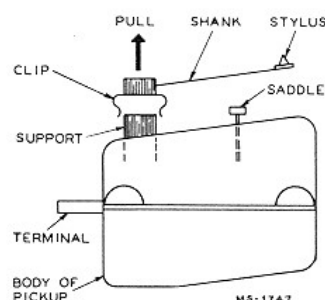
Pickup Stock
No. 74067
or
No. 75575



Sapphire Stock
No. 74068



Sapphire Stock
No. 74985
Pickup Stock
No. 76297



Sapphire Stock
No. 79849
Pickup Stock
No. 79791